

Fig. 1

Layer No.	Material	Mole (start)	Fraction (finish)	Strain %	PL (nm)	Thickness (μm)	CV (start)	Level (finish)	type	Dopant
12	GaAs				cap	0.005	$>2e19$		p	Zn
11	Al(x)GaAs	0.5		0	*** (see below)	0.5	$>2e19$		p	Zn
10	GaAs					0.1	$>2e19$		p	Zn
9	Al(x)GaAs	0.32	0.0			0.12	$2e18$		p	Zn
8	Al(x)GaAs	0.32				1.7	$2e18$		p	Zn
7	Al(x)GaAs	0.32				0.2	$2e17$	$2e18$	p	Zn
6	Al(x)GaAs	0.1	0.32			0.11			U/d	U/d
5	GaIn(x)As	0.17		1.19	970 nm	0.008			U/d	U/d
4	Al(x)GaAs	0.32	0.1			0.11			U/d	U/d
3	Al(x)GaAs	0.32				1	$2e18$		n	Silicon
2	Al(x)GaAs	0	0.32			0.25	$2e18$		n	Silicon
1	GaAs					0.5	$2e18$		n	Silicon

Fig. 2

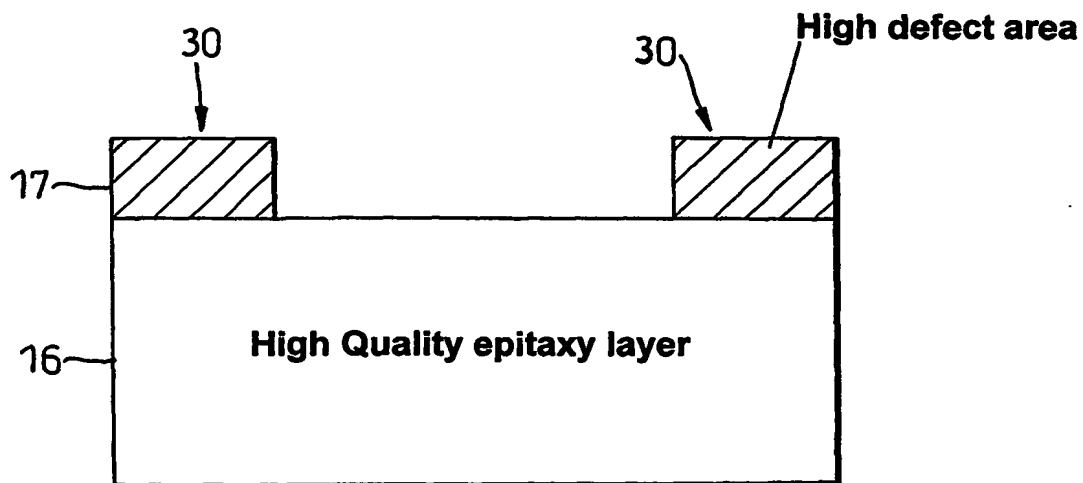


Fig. 3

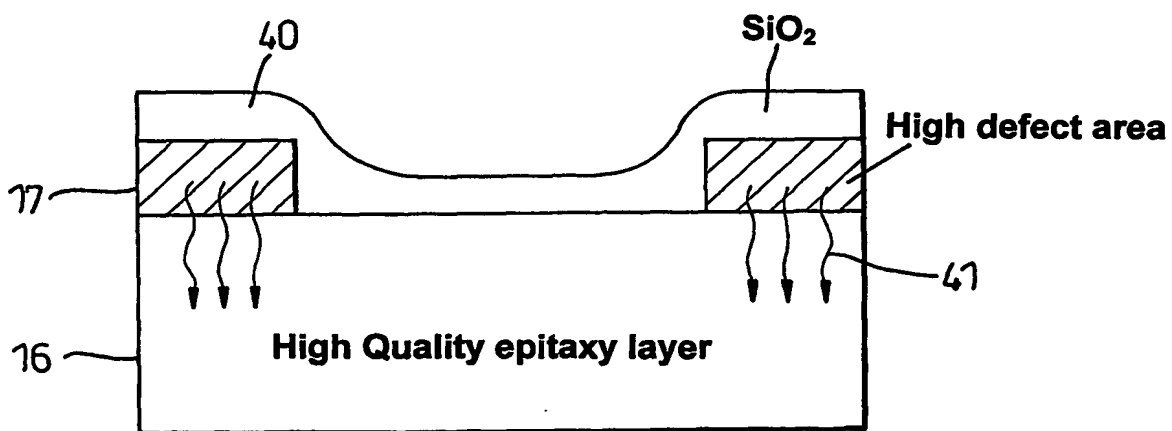


Fig. 4

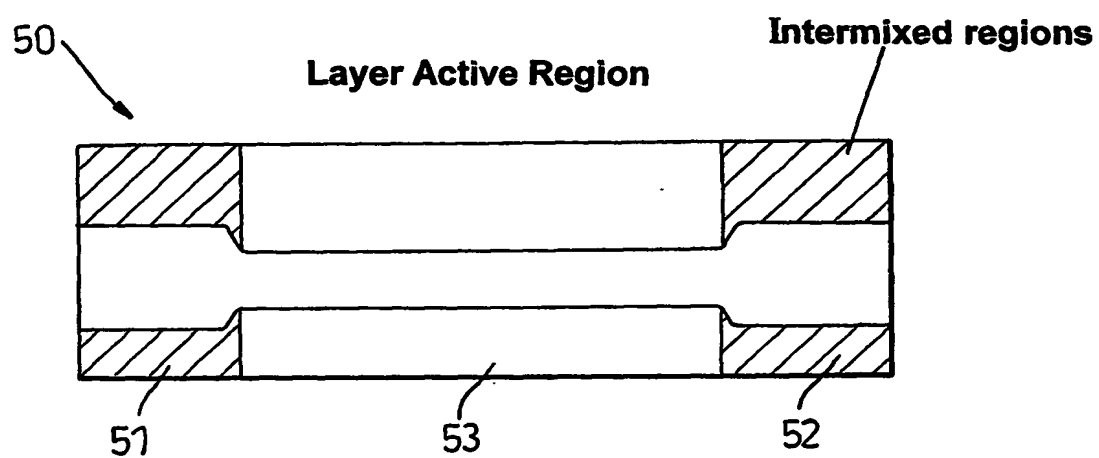
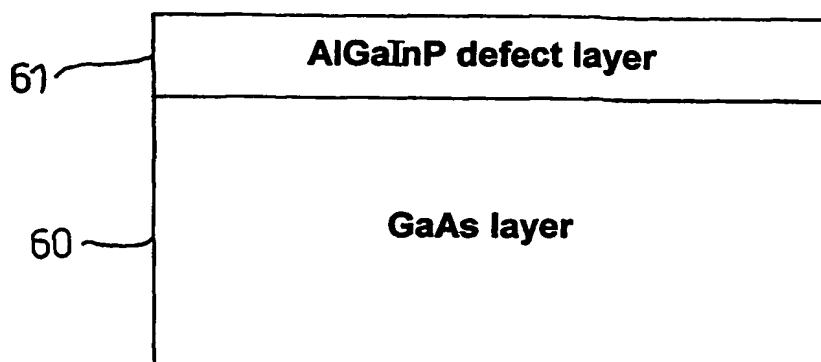
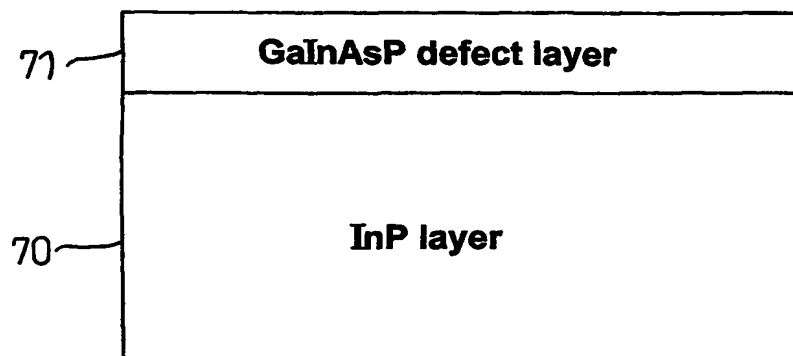
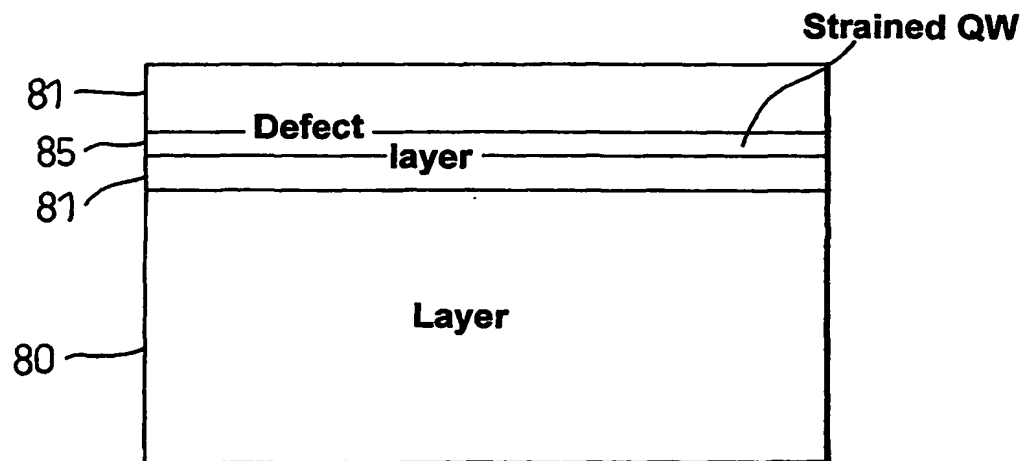
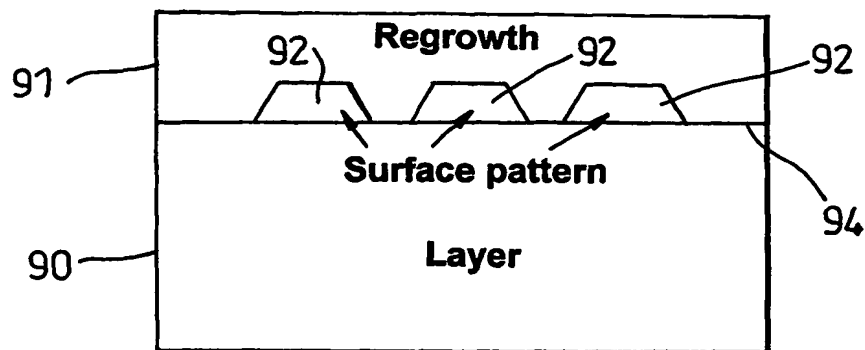
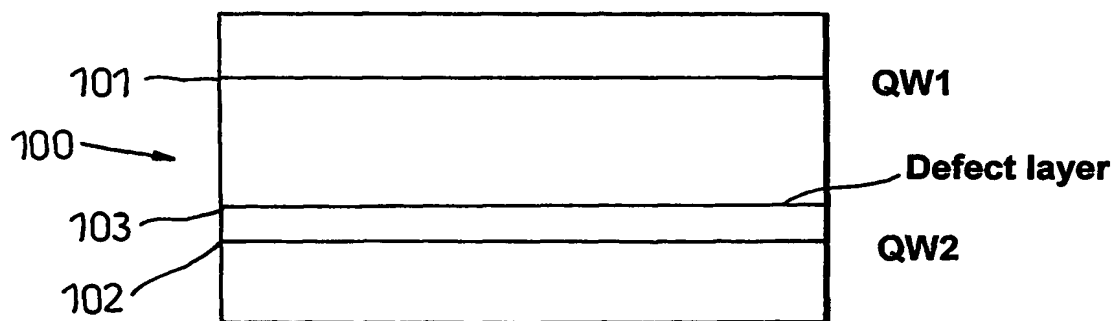
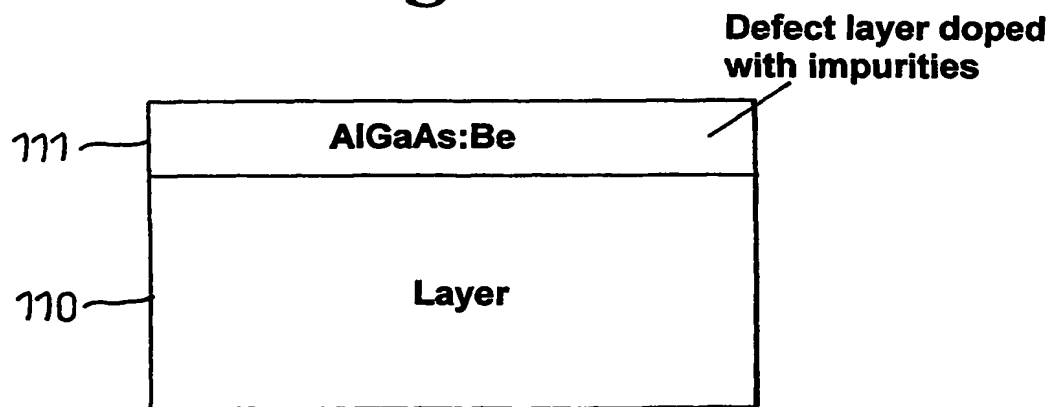


Fig. 5

***Fig. 6******Fig. 7******Fig. 8***

**Fig. 9****Fig. 10****Fig. 11**

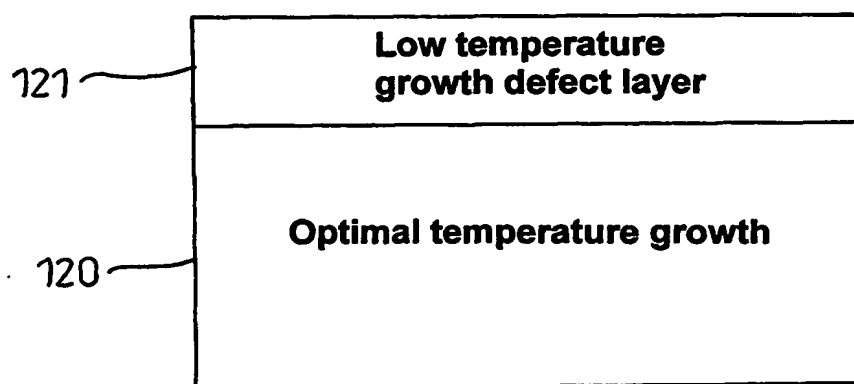


Fig. 12